

Albany State University
Drought Management and Water Conservation Plan
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October 31, 2007

As a result of the unprecedented drought conditions now facing Georgia and in response to an Executive Order² signed October 24, 2007 by Governor Sonny Perdue, Albany State University shall implement the following Drought Management and Conservation Plan (Plan) to promote efficient use of our water resources.

Goal: To immediately decrease on-campus water use by no less than 15% and to further develop a mindset of environmental stewardship among ASU faculty, staff, students and alumni both on and off campus.

The Plan is divided into three sections: (1) non-discretionary measures to be implemented upon signature of the President (2) suggested conservation measures/programs that may be adopted in the near term and (3) education and outreach. A brief discussion of assessment and future implementation follows Section 3.

Section 1: Mandatory conservation measures; Implementation – Immediate

- A. Leak assessment of water distribution/return infrastructure including supply lines, irrigation systems, restroom facilities and sewage. A 24 hour “shutdown” test of the system shall be performed by Facilities Management personnel during the November 21-23, 2007 Thanksgiving holiday. Problems shall be noted and repairs scheduled at the earliest possible time. Routine assessments of all water systems on campus shall be completed monthly by Building Coordinators or designee and reports cataloged in Facilities Management.
- B. Suspension of all water use for irrigation purposes until further notice. Exception includes irrigation deemed essential for maintenance of athletic fields. However, these practices shall not conflict with Georgia Department of Natural Resources Rules 391-3-30 (Outdoor Water Use)³.
- C. Discontinue installation of all new landscaping on campus until further notice.
- D. Discontinue washing of state vehicles except in the event driver safety may be compromised until further notice.
- E. Limit the use of water where practical in the cleaning of University facilities. Complete suspension of power/pressure washing until further notice.
- F. Investigate the potential of capture and reuse of condensate from cooling systems.
- G. Discontinue use of any decorative fountains until further notice.

¹ Masters and Means are Director and Administrative Specialist, respectively at the Albany State University Flint River Water Planning and Policy Center.

² See Appendix A

³ Southwest Georgia and thus ASU are currently under Drought Response Level 2 watering restrictions. Outdoor watering may only occur between the hours of 12 midnight and 10:00am on an odd-even schedule according to street address. A full version of GADNR Rule 391-3-30 (Outdoor Water Use) may be found in Appendix B.

- H. Unauthorized and/or inappropriate use of water shall be fined on a scale equal to that of campus parking violations. These uses include attaching to ASU infrastructure for personal use such as vehicle washing, tampering or modifying equipment to access/divert excess water or other uses deemed inappropriate by University officials.
- I. Assign duties of water conservation compliance to Robert Lawson, Assistant Director of Facilities Management. A monthly report of progress including water savings, program successes/failures and recommendations for future action shall be compiled and distributed, at a minimum, to the Director of Facilities Management, Vice President of Fiscal Affairs and President.

Section 2: Additional conservation programs; Implementation – 1 to 3 months

- A. For irrigation deemed essential for preservation of athletic fields, water shall be applied using guidance from the Cooperative Extension Service or others to ensure over-watering does not occur.
- B. Begin phase out of higher water use landscaping in exchange for native, more drought tolerant plants and shrubbery.
- C. Utilize more disposable items in food service to decrease the amount of water used for dishwashing. Provide for recycling of disposable products to minimize net impact of waste.
- D. As repair and/or replacement becomes necessary, ASU will adopt a program of installing conservation fixtures such as low flow toilets (the bulk on campus already fall in this category), low pressure shower heads and faucet aerators to help reduce water demand.
- E. Install water meters at individual campus buildings/dorms to monitor total water use. Provide an incentive to the building unit with lowest water usage or greatest reduction for the month, quarter, etc....
- F. Encourage students living on-campus to only wash clothes two days per week or at such time a full load can be accumulated. Further encourage the use of hand washing dishes or only using dishwashers for full loads.

Section 3: Educational/Outreach; Implementation – 1 month

- A. Materials offering suggested techniques for enhanced indoor and outdoor water conservation will be distributed to ASU faculty, staff, students and alumni through e-mail, standard mail, signage in common areas and through media including ASU-TV and WASU radio.⁴ Particular attention will be given to indoor conservation in student housing facilities.
- B. The Flint River Water Planning and Policy Center (FRWPPC), an Academic Support Unit of ASU, will distribute via e-mail weekly water conservation “tips”

⁴ A great deal of material regarding indoor and outdoor water conservation is available through the Georgia Environmental Protection Division at www.conservewatergeorgia.net. A portion of these measures are included in Appendix C. In addition, the Flint River Water Planning and Policy Center at ASU is a participant in the WaterSmart program which also provides water conservation information for all use sectors.

- as well as a status of the resource including ground/surface water levels and accumulated/anticipated rainfall.
- C. Publicize the existing procedures for ASU employees and/or students to report problems such as leaks directly to Facilities Management water compliance personnel. A link to the pertinent information will be posted on the ASU web page for ease of use as well as included in all distributed educational materials.
 - D. Invite speakers from environmental agencies, i.e., waterSmart, Georgia EPD, Keep Albany-Dougherty Beautiful, etc. to provide an educational information symposium at least once per semester. Arrange with instructors to offer incentives for student attendance.
 - E. Involve student body through the Student Government Association or other groups by having contests on most innovative way to conserve water; displays in dorms; educate RAs who would then educate students in the dorms.

Attainment of the above stated goal will be determined using a baseline of November 1, 2006 through March 31, 2007. We anticipate achieving a 15% reduction in on-campus water demand as calculated by metered usage from the Albany Water, Gas and Light Commission through adoption of this Plan for the upcoming period November 1, 2007 through March 31, 2008. An assessment will be made for the entire period as well as individual months. The Plan may be evaluated and modified semi-annually to adjust for success/failure of the above or to reflect changes to state rules/regulations.

Just a few things to consider:

- A 15% water reduction would save ASU \$27-\$30,000 per year.
- If each student living on campus would shower for one minute less, we would save over 700,000 gallons of water per academic year.
 - If everyone in the Albany metro area did the same thing, we would save over 116 million gallons per year.
- Students on campus could save over 2000 gallons per day by turning off the faucet while brushing their teeth.
- Campus water use more than doubles during the summer months. Figures back-calculated from Procurement records but generally speaking we spend around \$35-\$40k per year on irrigation.

Special thanks to James Sackor for getting all the people together for these quick meetings and taking us around campus to gather additional input. Acknowledgement of those contributing via personal communication:

Facilities Management - Albert Whitfield, Sr., Arthur Gilmore, Jr., Robert Lawson, James Oliver, James Sakor, Michael Simmons, Celious Williams

Dining – Aaron Kelly

Housing – Antionette Hightower, Bonisha Townsend, D. Johnson

Procurement – Loretta Harris

Fiscal Affairs – Larry Wakefield



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

- WHEREAS:** The government of the State of Georgia should *lead by example* in adopting, implementing and promoting water conservation practices; and
- WHEREAS:** The State of Georgia is currently developing a Statewide Water Plan to help ensure that Georgia's use of water is sustainable and protects water quality; and
- WHEREAS:** The State of Georgia is a large business enterprise and a substantial consumer of water, and water expenses represent a substantial operating cost for State Government; and
- WHEREAS:** The State of Georgia is currently experiencing record low rainfall and many of Georgia's rivers, streams and reservoirs are at the lowest levels ever recorded, including the composite storage of the entire Apalachicola-Chattahoochee-Flint system, which is down to less than 45% capacity; and
- WHEREAS:** The State of Georgia recognizes its obligation to conserve water under these exceptional drought conditions by imposing the highest level of restrictions on water use in the state's history; and
- WHEREAS:** Many of Georgia's communities and industries have gone beyond the regional ban on outdoor watering by limiting other water uses and implementing even more rigorous conservation measures; and
- WHEREAS:** The Southeast Climatologist Consortium has forecast an unusually mild cool season with little rain; and
- WHEREAS:** The Army Corps of Engineers has not modified the Interim Operating Plan to adjust for this extreme drought; and
- WHEREAS:** Increased water conservation efforts by the agencies and departments of the State of Georgia will result in economic and environmental benefits to the residents of Georgia, including:
- Reducing water consumption from Georgia's water resources
 - Reducing dollars spent on water production and utility costs
 - Extending the life of existing water supplies

- Protecting the environment, including river flows and aquifer levels and the species dependant on them
- Demonstrating responsible use of shared waters

NOW, THEREFORE, BY THE POWER VESTED IN ME AS THE GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY

ORDERED:

The Department of Natural Resources, in cooperation with other state agencies, professional associations and volunteers, shall develop a water conservation implementation plan that outlines water conservation goals, benchmarks and practices for Georgia state facilities, and water conservation goals, benchmarks and practices for Georgia's diverse water use sectors, citizens and businesses.

IT IS FURTHER

ORDERED:

That state facilities will immediately execute the following water conservation practices to reduce non-essential water use, water waste and water loss:

- Conduct periodic checks of facility restrooms, boiler rooms, etc., to ensure appliances are working at maximum efficiency;
- Comply with the current outdoor water schedule or the outdoor water use ban. In areas operating under a Level 2 Drought Declaration, water use is prohibited between the hours of 10:00am and 4:00pm;
- Discontinue installation of all new landscaping on state facilities;
- Optimize recovery and use of condensate, where possible;
- Discontinue washing the state fleet except in cases that would compromise driver safety; and
- Limit the use of water used in cleaning state facilities when possible including a complete ban on power washing; and
- Any other water conservation practice that limits the State of Georgia's non-essential water use, water waste, and water loss.

IT IS FURTHER

ORDERED:

That the Department of Natural Resources shall prepare and coordinate an information campaign and work with state agencies to encourage state employees to conserve water in and around the workplace and home.

This 24th day of October, 2007.


GOVERNOR

**RULES OF
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION**

**CHAPTER 391-3-30
OUTDOOR WATER USE**

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391-3-30-.01 Definitions

When used in this Chapter:

- (1) "Address" means the "house number" (a numeric or alphanumeric designation) that, together with the street name, describes a physical location of a specific property. "Even numbered address" means a house number ending with the number 0, 2, 4, 6, 8, or no house number. "Odd numbered address" means a house number ending with the number 1, 3, 5, 7, or 9.
- (2) "Declared Drought Response Level" means one of four levels of drought that can be declared based on the severity of drought conditions, with one being the least severe and four being the most severe.

391-3-30-.02 Applicability of Rule

These rules apply to any entity, and its customers, permitted by the Georgia Environmental Protection Division (EPD) for water withdrawal or for operation of a drinking water system.

391-3-30-.03 Outdoor Water Use Schedule During Non-Drought Periods

- (1) Outdoor water use other than exempted activities shall occur only as follows:
 - (a) Odd-numbered addresses: outdoor water use is allowed on Tuesdays, Thursdays and Sundays.
 - (b) Even-numbered addresses: outdoor water use is allowed on Mondays, Wednesdays and Saturdays.

391-3-30-.04 Outdoor Water Use Schedule During Declared Drought Response Levels

- (1) The Director of the Environmental Protection Division is authorized to make drought declarations.

- (2) During declared drought conditions, outdoor water use other than activities exempted in 391-3-30-.05, shall occur only during scheduled hours on the scheduled days.
- (3) Declared Drought Response Level One – Outdoor water use may occur on scheduled days within the hours of 12:00 midnight to 10:00 a.m. and 4:00 p.m. to 12:00 midnight.
 - (a) Scheduled days for odd-numbered addresses are Tuesdays, Thursdays and Sundays.
 - (b) Scheduled days for even-numbered addresses are Mondays, Wednesdays and Saturdays.
 - (c) Use of hydrants for any purpose other than firefighting, public health, safety or flushing is prohibited.
- (4) Declared Drought Response Level Two – Outdoor water use may occur on scheduled days within the hours of 12:00 midnight to 10:00 a.m.
 - (a) Scheduled days for odd-numbered addresses are Tuesdays, Thursdays and Sundays.
 - (b) Scheduled days for even-numbered addresses and golf course fairways are Mondays, Wednesdays and Saturdays.
 - (c) The following uses are prohibited:
 - 1) Using hydrants for any purpose other than firefighting, public health, safety or flushing.
 - 2) Washing hard surfaces, such as streets, gutters, sidewalks and driveways except when necessary for public health and safety.
- (5) Declared Drought Response Level Three – Outdoor water use may occur on the scheduled day within the hours of 12:00 midnight to 10:00 a.m.
 - (a) The scheduled day for odd-numbered addresses is Sunday.
 - (b) The scheduled day for even-numbered addresses and golf course fairways is Saturday.
 - (c) The following uses are prohibited:
 - 1) Using hydrants for any purpose other than firefighting, public health, safety or flushing.
 - 2) Washing hard surfaces, such as streets, gutters, sidewalks, driveways, except when necessary for public health and safety
 - 3) Filling installed swimming pools except when necessary for health care or structural integrity.

- 4) Washing vehicles, such as cars, boats, trailers, motorbikes, airplanes, golf carts.
- 5) Washing buildings or structures except for immediate fire protection.
- 6) Non-commercial fund-raisers, such as car washes.
- 7) Using water for ornamental purposes, such as fountains, reflecting pools, and waterfalls except when necessary to support aquatic life.

(6) Declared Drought Response Level Four – No outdoor water use is allowed, other than for activities exempted in 391-3-30-.05, or as the EPD Director may order.

391-3-30-.05 Exemptions

(1) This rule shall not apply to the following outdoor water uses:

- (a) Capture and re-use of cooling system condensate or storm water in compliance with applicable local ordinances
- (b) Re-use of gray water in compliance with applicable local ordinances

(2) The following established landscape water uses are exempt from the outdoor water use schedules of this rule.

- (a) Use of reclaimed wastewater by a designated user from a system permitted by EPD to provide reclaimed wastewater.
- (b) Irrigation of personal food gardens.

(3) Newly (in place less than thirty days) installed landscapes are subject to the following:

- (a) Irrigation of newly installed landscapes is allowed any day of the week, but only during allowed hours for the drought response level in effect, for a period of 30 days following installation. No watering is allowed during Drought Response Level Four.
- (b) For new landscapes installed by certified or licensed professionals, commercial exemptions apply.

(4) The following golf course outdoor water uses are exempt from the outdoor water use schedules of this rule.

- (a) Use of reclaimed wastewater by a designated user from a system permitted by EPD to provide reclaimed wastewater.
- (b) Irrigation of fairways during times of non-drought and Declared Drought Response Level One.
- (c) Irrigation of tees during times of non-drought and Declared Drought Response Levels One, Two and Three.
- (d) Irrigation of greens.

(5) The following commercial outdoor water uses are exempt from the outdoor water use schedules of this rule.

- (a) Professionally certified or licensed landscapers, golf course contractors, and sports turf landscapers: during installation and 30 days following installation only. Professional landscapers must be certified or licensed for commercial exemptions to apply.
- (b) Irrigation contractors: during installation and as needed for proper maintenance and adjustments only.
- (c) Sod producers.
- (d) Ornamental growers.
- (e) Fruit and vegetable growers.
- (f) Retail garden centers.
- (g) Hydro-seeding.
- (h) Power-washing.
- (i) Construction sites.
- (j) Producers of food and fiber.
- (k) Car washes.
- (l) Other activities essential to daily business.
- (m) Watering-in of pesticides and herbicides on turf.

391-3-30-.06 Local and Regional Options

(1) Local and regional water providers are authorized to implement additional outdoor water use restrictions within their jurisdictions. Action items to consider at the local/regional level include, but are not limited to, the following: developing system integration and interconnection to reduce drought vulnerability, placing additional water use restrictions on specific commercial uses, putting water conservation based rates in place (increasing block/summer surcharge) and placing additional restrictions on outdoor water use.

(2) Local and regional water providers may request approval of alternative days for outdoor water use for purposes of enforcement, peak water usage, timing of recovery days, and other valid reasons. Approval shall be contingent upon:

- (a) Written notification to, and approval by, EPD of the alternate watering schedule; and
- (b) Enactment of a local ordinance allowing no more than 3 days a week outdoor watering during time(s) of day consistent with the level of drought as set forth in sections 391-3-30-.03 and -.04 of this rule.
- (c) Regional consistency.

GEORGIA ENVIRONMENTAL PROTECTION DIVISION

TIPS - - For SAVING WATER - - At your BUSINESS

By saving water in your daily business practices, you are also actively contributing to reducing demand on our precious drinking water.

- **Educate your employees and co-workers.** Building understanding among your employees and co-workers is important. Awareness of water scarcity issues and impacts of water conserving practices not only saves water, but also saves money (on operation and production costs.) Educated employees will be able to identify problems before they become serious and can help think innovatively about ways to conserve or reuse water within the facility.
- **Know your usage.**
 - ***Start with reading your water meter.*** By reading your water meter daily, weekly or monthly you can record your average water consumption. Water meters generally are located near the front of your property. It is suggested that the meters are read and recorded at the beginning of shutdown and at the recommencement of operations. Any water use during shutdown can be attributed to leaks and the source should be investigated. If your business has multiple buildings or processes, to help you fully understand your water use, you can install a separate meter at each location. Meter reading can be easily incorporated into your existing maintenance, security or cleaning routines.
 - ***Next establish a baseline use.*** Your water and sewer bills can help you understand your historical water use. To establish a baseline for your average daily consumption, divide your monthly or bi-monthly bill by the number of days in that billing period. This baseline can only be used for comparison if business volumes do not fluctuate. For businesses that have seasonal or growth demands, measuring water use per unit of production is the best way to assess your water efficiency. For example if your business grows, your total water use may increase even if you have implemented water saving initiatives.
- **Identify and fix leaks.** The easiest way to identify when leaks occur is to understand when your use rises above a base level of use for your operations. Once you have identified that there may be a leak on your property, you need to take steps to locate and repair the leak. To locate leaks:
 - Look for any trend of increased usage that cannot be associated with increased business through sub-meters.
 - Conduct regular inspections of equipment or areas where leaks could occur, like pipe-work joints, connections and fittings. Indications include dampness, rust marks or swelling boards. Significant leaks can often be detected by listening in the absence of other noise.
 - Check equipment. Worn, old or poorly maintained equipment can waste significant amounts of water.
 - Install monitoring or sub-meter systems that alert you when excessive flows or reduced pressures breach normal ranges.
 - For concealed or subsurface pipe-work, leakage detection companies can employ techniques such as pressure testing, flow monitoring and echo correlation.

- **Maximize the efficiency of your cooling tower** and consider eliminating "once-through" cooling of equipment with municipal water by recycling the water flow to cooling towers or replacing it with air-cooled equipment. High volumes of water can be lost as water vapor while performing the cooling function.
- **Install water efficient equipment.**
 - Install ultra-low flow toilets, adjust flush valves or install dams on existing toilets.
 - Install faucet aerators and high efficiency shower heads.
 - Use water-conserving ice makers.
 - As appliances and equipment wear out, replace them with water-saving models.
- **Minimize the use of water for cleaning purposes.**

Indoors

- Use brooms, squeegees and dry vacuum cleaners to clean surfaces before washing with water.
- Use washing equipment that has aerated spray nozzles equipped with shut-off valves.
- Fit hoses with high pressure, low volume nozzles with shut-off valves.
- Where possible, mop floors rather than hosing.
- Switch from 'wet' carpet cleaning methods, such as steam cleaning, to 'dry' or 'spot cleaning' (powder methods).

Outdoors

- Sweep parking areas rather than hosing, unless it's required for health regulations.
- Sweep paved areas.
- Reconsider the need to wash building exteriors or other outside structures.
- Reduce frequency of cleaning external equipment and floors where possible.
- Change window cleaning schedule from 'regular' to 'as required' and use squeegees to clean the windows.
- Unless it's needed for operator safety, wash vehicles only when needed.
- Unless it's needed to protect human health and maintain safety, limit use of high pressure sprayers.

**For outdoor water use tips,
visit www.ConserveWaterGeorgia.net**

**For information about the drought and current drought response levels,
visit www.gaepd.org**

Information compiled by the Georgia Environmental Protection Division (www.gaepd.org) and collected from EPA WaterSense (www.epa.gov/watersense) and from Brisbane City Council Watersense water saving tips (www.brisbane.qld.gov.au)

September 28, 2007

GEORGIA ENVIRONMENTAL PROTECTION DIVISION

- - SAVING WATER - - Inside the Home

TIPS

Turn off the lights when you are not in the room and cut the air conditioner back when you are not at home. Energy is produced using large volumes of water. Reducing energy demands can reduce the water needed to produce that energy.

- **In the KITCHEN**

- **Refrigerate a bottle or glass of water** instead of letting a faucet flow until the water runs cold.
- **Prepare food efficiently.** Speed cleaning food by using a vegetable brush. Spray water in short bursts. Faucet aerators cut consumption.
- **Defrost sensibly.** Plan ahead to defrost foods overnight in the refrigerator. Don't use running water. Use the microwave or put wrapped food in a bowl of cold water.
- **Reduce dishwashing.** Use rubber spatula to scrape dishes clean to limit pre-rinse. Let really dirty pans or dishes soak to speed washing. Most newer dishwashers don't require pre-rinsing. Limit dishwasher use to full loads.
- **Reuse clean household water.** Collect all the water that is wasted while waiting for the hot water to reach your faucet or showerhead. Use this to water your houseplants or outdoor planters. Do the same with water that is used to boil eggs or steam vegetables.
- **Garbage disposal alternatives.** Avoid using your garbage disposal. Compost leftovers fruits and vegetables.

- **In the BATHROOM**

- **Don't use the toilet as a trash can.** Every flush you eliminate can save between two and seven gallons of water.
- **Use a glass for rinse water** when brushing teeth instead of letting the faucet run. Shave the same way. An electric razor also saves water.
- **Fix leaking faucets and toilets.** Research has shown that an average of 8% (or more) of all home water use is wasted through leaks. Test for a leaking toilet by lifting the lid off the toilet tank and putting a few drops of food coloring into the bowl. Wait a few minutes, then look in the bowl. If the food coloring has made its way there, you have a leak.
- **Install a low-flow toilet.** Low-flow toilets need only 1.6 gallons per flush, saving thousands of gallons per year. Unlike earlier models, low flow toilets available today receive high marks from consumers for overall performance.
- **Conserve water in the tub.** Take showers instead of a bath and save 30 gallons. Filling the bathtub uses about 50 gallons of water. Try filling it just half way.
- **Shorten your shower by one minute.** Cut back on your shower time and you will rack up big savings in water and energy. If you really want to try and save water, limit your shower time to five minutes or less. Also, install a water-saving showerhead that uses two-and-a-half gallons per minute.

- **In the LAUNDRY**

- **Wash only full loads of laundry.** You'll not only save water, but energy as well.
- **Consider purchasing a new water- and energy- efficient clothes washer.** Look for the Energy Star labeled products and save more water in one year than a person drinks in a lifetime. These units create less wear and tear on clothes, clean better, and use less detergent. Some electric utilities offer rebates for qualified models. See www.energystar.gov for more information.

**For more tips on indoor conservation and on outdoor water use,
visit www.ConserveWaterGeorgia.net**

**For more information about the drought and the current drought response,
visit www.gaepd.org**

Information compiled by the Georgia Environmental Protection Division (www.gaepd.org) and collected from UGA College of Agriculture and Environmental Science (www.caes.uga.edu), the Massachusetts Drought Management Task Force (www.mass.gov/dep/water), and EPA WaterSense Program (www.epa.gov/watersense)

September 28, 2007



Managing a *waterSmart* Landscape

TIPS

Lawns, plants, and shrubs need only one inch of water every 7 to 10 days to remain healthy. To determine one inch of water, place a small shallow pan in the path of your lawn sprinkler. Monitor the time that it takes to fill the pan to a one inch depth. Use this as a guide for each sprinkler in your yard. If water begins to run off before one inch is collected, turn off the water and allow the soil to absorb the surface water before returning to finish the one inch accumulation.

Water only once per week. When it hasn't rained, a deep soaking every week will provide your plant plenty of moisture.

Soak, don't sprinkle. When you water, aim the nozzle at the base of the plants so more water will reach the roots.

Don't water in the heat of the day. You will only lose water to evaporation. If you have an automatic system, set it to come on in the early morning hours between 4 a.m. and 10 a.m.

Turn off the sprinkler systems when it rains. Install an inexpensive rain sensor shut-off switch.

Mulch! Using pine straw, bark chips or ground hardwood mulch on the roots of the plants and trees helps the soil retain water.

Don't water until plants need it. Far more plants die from over-watering than under-watering. For many garden plants, the best way to know if plants need water is to let your finger be the guide. Dig down several inches near the base of the plant. If the soil is bone dry, that's your cue to water. When a plant begins to show signs of wilting, especially in the morning, it probably needs water.

Water the roots and soil around plants rather than spraying the leaves and flowers.

Using more efficient irrigation techniques. Drip irrigation systems, automatic controllers with rainfall sensors and soaker hoses all successfully achieve more efficient irrigation and reduce water loss from evaporation. Individual plants that are visibly stressed also benefit from hand watering.

Select a sprinkler that releases water slowly and close to the ground rather than one that releases a mist that tends to evaporate quickly.

Check to see if your lawn sprinklers are working properly. Test your sprinkler by making sure it goes edge to edge and doesn't water the street instead of your lawn. Sometimes all it takes is to just adjust the sprinkler head to make sure it has uniformity. *Remember there are watering restrictions in place.

Don't use sprinklers for entertainment. Running through water from a hose or sprinkler is fun and a nifty way to cool down, but it wastes hundreds of gallons of water in a short time. Also, running and playing on wet grass will compact soils and lead to a decline in lawn health and vigor.

Don't be shy with mulch when it comes to your trees this summer! Use mulch to cover the entire area of the tree to the ends of the branches. This keeps the soil cool, combats weeds, conserves water and creates more visual appeal than trying to grow grass in the area.

Fine-textured mulches hold moisture better than coarse-textured mulches. Good mulches to use are pine straw, bark chips or ground hardwood mulch. Avoid large nugget pine bark, rock, gravel and marble.

To enhance your mulch, saturate old newspaper and place below the mulch to help retain moisture in the soil.

A slight adjustment to your lawn mower can drastically increase lawn survival during a drought. Encourage deeper rooting by raising the mower blade during dry weather. Cutting the grass a little higher raises lawn survival rates and decreases water demand. Sharp blades also help reduce the need for water because dull blades shred leaf tips, causing the turf to use more water than necessary.

Adjust your mower to a higher setting and mow more frequently. Consider leaving clippings on the lawn. Longer grass blades provide shade and help hold in moisture longer.

Keep off the grass. Avoid walking on grass during periods of drought stress. Mow lawns as little as possible during droughts to avoid additional stress, and cut at the highest possible setting. Never remove more than 1/3 of the leaf blade in one mowing. Allow mulched clippings to remain on the lawn to help cool the soil and retain moisture.

Aerate your lawn. Aeration improves the movement of water and nutrients into the soil, decreases run-off and encourages the roots of grass to grow deeply and to become drought tolerant.

For more outdoor water use tips,
visit www.ConserveWaterGeorgia.net

For information about the drought and current drought response levels,
visit www.gaepd.org

September 28, 2007